

**U.S. Environmental Protection Agency
Science Advisory Board
Committee: Advisory Council on Clean Air Compliance Analysis (Council)
Special Council Panel for the Review of the Third 812 Analysis
Summary Minutes of Public Teleconference
Date: May 28, 2003**

Committee Members: (See Roster - Attachment A)

Date and Time: 12 pm to 2 pm, May 28, 2003 (See Federal Register Notice - Attachment B.)

Location: By teleconference only

Purpose: The purpose of the call was to provide the Special Council Panel with the opportunity to: (1) clarify the charge question related to "Benefits and Costs of the Clean Air Act 1990-202; Revised Analytical Plan for EPA Second Prospective Analysis;" (2) understand recent Agency decisions to defer several charge questions and revise review material and; (3) discuss scheduling of review activities, given a previously announced public meeting of the Council Special Panel on June 11-13, 2003 in Washington, DC in light of recent Agency decisions.

Attendees: Chair: Dr. Trudy Cameron; COUNCIL Members: Dr. David Allen; Ms. Laurie Chestnut, Drs. James Hammitt, Lawrence Goulder (listening on, but not participating in the call as a panel member); Reed Johnson, Charles Kolstad, Lester Lave, Bart Ostro, Kerry Smith.

Other Members of the Special Council Panel: Drs. John Evans, Dale Hattis, and Warner North; SAB Staff: Dr. Angela Nugent, Designated Federal Official.

Other Persons Attending: From EPA: James DeMocker; Jessica Furey; Dave Guinnup, Brian Heninger, John Langstaff, Harvey Richmond. EPA Contractors: Leland Deck, Abt Associates Sharon Douglas, ICF Consulting/SAI; Sharon Post, Abt Associates Jim Neumann, IEc, Henry Roman, IEc, Jason Price, IEc, Katie Walker, IEc, Jim Wilson, Pechan.

Meeting Summary:

The discussion departed in part from the issues and timing as presented in the meeting Agenda (see Meeting Agenda - Attachment C). The teleconference lasted until 3:00 pm. There were no written comments submitted to the Committee, and there was no written request to present public comments during the discussion.

Welcome and Introductions - Dr. Trudy Cameron, the Chair, opened the session at 1 p.m. welcoming members of the panel (Roster, Attachment A). Dr. Angela Nugent, Designated Federal Official (DFO) took roll.

Discussion of Charge to the Council and Recent Agency Decisions

The DFO began the discussion by informing the Council that the SAB Staff Office learned from the Agency on May 27th that the Agency had decided to defer 20 charge questions and revise the review document sent to the Council and other Special Panel Members for review in mid May. Mr. James DeMocker then provided background on these decisions. He opened his

remarks by thanking SAB members and panelists for their commitment to help the Agency with the review of the revised analytical plan for the second prospective study. He commented on the recent NRC report, the ongoing uncertainty about the availability of CMAQ, and our need to await issuance of the new 1999 National Emissions Inventory (NEI) as reasons why we did not start the analysis following the SAB review of the June 2001 draft blueprint. He acknowledged the large size of the review document (455 pages) and began a discussion of the Agency's recent decisions to redesign some elements of the analytical plan, to defer several charge questions, and to move to a phased approach for Council review, where Council attention would be requested in a preliminary stage for a subset of the 37 questions sent to the Agency.

Mr. DeMocker then itemized the recent decisions to change the charge questions sent to the Council. The list of changes is contained in Attachment D, which had been provided to the Council on Tuesday, May 27, 2003. He suggested that the Agency's plan was to issue an updated analytical plan and charge questions later in 2003 and send that material as soon as it was available to Council Members for review.

Council members raised several issues concerning deferring charge questions. A concern was raised about deferring advice on uncertainty analysis to a time when the advice could be less useful for the overall design of the study. Mr. DeMocker responded that the Agency was keenly aware of the importance of uncertainty analysis and envisioned continuing probability-based uncertainty analysis, data driven efforts to further populate Monte Carlo analyses, and pilot projects. Other Council members spoke of the importance of early attention to general issues associated with uncertainty analysis, and scenario development, for the entire study. Dr. David Allen, Chair of the Council's Air Quality Modeling Subcommittee (AQMS) spoke of the AQMS need to understand the overall approach to uncertainty, even though nearly all the emissions and air quality modeling questions to be addressed were charge questions not deferred. Another member spoke of the need for review to check for inconsistencies between inventories and the treatment of uncertainties for both costs and benefits.

Another point raised concerned the impact of a report by the Office of Management and Budget, Office of Information and Regulatory Affairs (OIRA) draft guidelines on the second prospective study. Mr. DeMocker acknowledged that then OIRA report had raised analytical issues for second prospective study. Dr. Warner North asked the DFO to circulate his comments to OIRA on its draft guidelines, along with website information on the report itself.

Dr. Bart Ostro, Chair of the Health Effects Subcommittee, asked why there was a request to alter the health effects charge questions so soon before the Council meeting. Mr. DeMocker explained that release of the document focused attention on emerging issues, and the Agency itself recognized a need to refine charge questions and address several data issues.

The Council then discussed several options for planning its review of the Agency's analytical plan, given recent events. One option discussed was meeting in June as planned and providing advice on the entire document and all charge questions. Members discussed the

benefits of providing advice at a very early stage, where there was most potential for assisting the Agency with choice of data and methods, before the Agency project team makes significant decisions that will affect the design of the project. Members also discussed the difficulty in scheduling another meeting for the Council Special Panel, AQMS, and HES, which were to meet simultaneously on June 11-13, 2003. Members suggested that if the June 11-13 meeting were to still happen, Agency officials could characterize the issues and options they were considering. Mr. DeMocker and Ms. Jessica Furey of the EPA Office of Policy, Economics and Innovation responded that the Agency would prefer to resolve these issues internally, to speak with one voice at on those topics, when a public meeting was to be held. She committed the Agency to providing a revised analytical plan in three to four weeks for Council review.

Other members of the Panel advocated postponing the meeting until the Agency had revised parts of the analytical plan and panel members could have time for review. The Panel Members asked for information about the extent of the text to be revised in order to weigh the benefits vs. the costs of deferring advice. Mr. DeMocker responded that he was not able to characterize the nature and extent of changes envisioned, given the recent nature of the Agency decisions. Council members expressed concern over providing advice on parts of the draft that were a "moving target." Panel Members also asked about the Agency's plans to proceed with analysis, while Council Panel advice was deferred. Mr. DeMocker responded that the Agency planned over the summer to work on emissions and refine scenario definitions over the summer and work on air quality modeling by December. Analysis of direct compliance costs would be done simultaneously with emissions, along with some of the sidebar analyses on Title 6 and hazardous air pollutants. Physical effects work and valuation of effects would follow in 2004. Council members considered this information and expressed concern over deferring Council advice until December or later.

A third option proposed involved holding a meeting in June on the seventeen charge questions not deferred and providing some preliminary analysis, and then planning a later meeting on the deferred questions.

The Chair called for a motion to resolve the issue of whether the Council should meet on June 11-13, 2003 as planned. Dr. Lester Lave made a motion to meet as planned to consider the full range of charge questions and the current analytical plan, along with briefings provided by EPA's Office of Air and Radiation and Office of Policy Economics and Innovation on the document and changes envisioned to it. Dr. Kerry Smith seconded the motion. The motion failed to pass, with 1 Yea, 7 Nays, and 3 Abstentions.

The Chair asked the Chair of the AQMS to consider, during the planned AQMS public teleconference call on May 30, 2003, whether to proceed with a short meeting of that group during the June 11-13, 2003 window, given that many of the 17 charge questions not deferred concerned AQMS issues. The AQMS Chair agreed to do so. The Chair also asked the DFO to canvass members of the special panel, AQMS, and HEES concerning members' availability for a meeting in the July, August, and September timeframe.

The Chair concluded the meeting by thanking members for their participation. Mr. DeMocker echoed these thanks and appreciation in advance for Council advice.

Action items:

1. DFO to circulate Dr. Warner North's comments to OIRA on its draft report, along with website information on the report itself.
2. The Chair of the AQMS to consider, during the planned AQMS public teleconference call on May 30, 2003, whether to proceed with a short meeting of that group during the June 11-13, 2003 window, given that many of the 17 charge questions not deferred concerned AQMS issues.
3. DFO to canvass members of the special panel, AQMS, and HEES concerning members' availability for a meeting in the July, August, and September timeframe.

At 3:00 p.m., Dr. Cameron adjourned the teleconference.

Respectfully Submitted:

/s/ Angela Nugent, July 15, 2003
Angela Nugent

Designated Federal Official

/s/ Angela Nugent
Certified as True: Trudy Cameron
Chair

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by the Council to the Agency during the course of deliberations within the meeting. Such ideas, suggestions and deliberations do not necessarily reflect definitive consensus advice from the Council. The reader is cautioned to not rely on the minutes to represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters, or reports prepared and transmitted to the EPA Administrator following the public meetings.

Attachment A - Roster

U.S. Environmental Protection Agency Science Advisory Board Advisory Council on Clean Air Compliance Analysis Special Council Panel for the Review of the Third 812 Analysis*

CHAIR

Dr. Trudy Cameron, Raymond F. Mikesell Professor of Environmental and Resource Economics, Department of Economics, University of Oregon, Eugene, OR
Also Member: Executive Committee

MEMBERS

Dr. David T. Allen, The Henry Beckman Professor in Chemical Engineering, Department of Chemical Engineering, University of Texas , Austin, TX

Ms. Lauraine Chestnut, Manager, Stratus Consulting Inc, Boulder , CO

Dr. Lawrence Goulder, Associate Professor, Department of Economics & Institute for International Studies, Stanford University, Stanford, CA
Also Member: Environmental Economics Advisory Committee

Dr. James Hammitt, Professor of Economics and Decision Sciences, Department of Health Policy and Management, School of Public Health, Harvard University, Boston, MA

Dr. F. Reed Johnson, Principal Economist and RTI Fellow, RTI Health Solutions, Research Triangle Institute, Research Triangle Park, NC

Dr. Charles Kolstad, Professor, Department of Economics, Bren School of Environmental Science and Management, University of California, Santa Barbara, CA

Dr. Lester B. Lave, Professor, Graduate School of Industrial Administration, Carnegie Mellon University, Pittsburgh, PA

Dr. Virginia McConnell, Senior Fellow; Professor of Economics, Resources for the Future, Washington, DC

Dr. Bart Ostro, Chief, Air Pollution Epidemiology Unit, California Office of Environmental Health Hazard Assessment (OEHHA), Oakland, CA

Dr. V. Kerry Smith, University Distinguished Professor, Department of Agricultural and Resource Economics, College of Agriculture and Life Sciences, North Carolina State University, Raleigh, NC

OTHER SAB MEMBERS

Dr. Dale Hattis, Research Professor, Center for Technology, Environment, and Development, Marsh Institute, Clark University, Worcester, MA

Member: Environmental Health Committee

CONSULTANTS

Dr. John Evans, Senior Lecturer on Environmental Science, Harvard University, Portsmouth, NH

Dr. D. Warner North, President, North Works Inc, Belmont, CA

Dr. Thomas S Wallsten, Professor, Department of Psychology , University of Maryland, College Park, MD

SCIENCE ADVISORY BOARD STAFF

Dr. Angela Nugent, Designated Federal Officer, 1200 Pennsylvania Avenue, NW, Washington, DC, Phone: 202-564-4562, Fax: 202-501-0323, (nugent.angela@epa.gov)

* Members of this SAB Panel consist of

a. SAB Members: Experts appointed by the Administrator to serve on one of the SAB Standing Committees.

b. SAB Consultants: Experts appointed by the SAB Staff Director to a one-year term to serve on ad hoc Panels formed to address a particular issue.

Attachment B - Federal Register Notice

Science Advisory Board; Advisory Council on Clean Air Compliance
Analysis; Notification of an Upcoming Public Meeting and Three
Planning Teleconferences

[Federal Register: May 14, 2003 (Volume 68, Number 93)]

[Notices]

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From the Federal Register Online via GPO Access [wais.access.gpo.gov]

[DOCID:fr14my03-54]

ENVIRONMENTAL PROTECTION AGENCY

[FRL-7498-3]

Science Advisory Board; Advisory Council on Clean Air Compliance
Analysis; Notification of an Upcoming Public Meeting and Three Planning
Teleconferences

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The EPA Advisory Council on Clean Air Compliance Analysis (Council) is announcing a public meeting and a public planning teleconference. It is also announcing planning teleconferences for its two subcommittees, the Air Quality Modeling Subcommittee (AQMS) and the Health Effects Subcommittee (HES).

DATES:

May 28, 2003: The planning teleconference call meeting for the Council will be held from 12 to 2 p.m. (eastern time).

May 29, 2003: The planning teleconference call meeting for the HES will be held from 12 to 1:30 p.m. (eastern time).

May 30, 2003: The planning teleconference call meeting for the AQMS will be held from 2 to 3:30 p.m. (eastern time).

June 11-13, 2003: The public meeting for the Council will begin June 11, at 9 a.m. and adjourn on June 13, 2003, no later than 2 p.m. (eastern time) on that day. The meeting agenda will be posted on the SAB Web site, <http://www.epa.gov/sab/agendas.htm>, one week before the

meeting.

ADDRESSES: The public meeting of the Council will be held in Washington, DC. The meeting location will be announced on the SAB Web site, <http://www.epa.gov/sab>. For further information concerning the public meeting, please contact Dr. Angela Nugent, DFO (see contact information below). Participation in the teleconference call meetings will be by teleconference only.

FOR FURTHER INFORMATION CONTACT: Any member of the public wishing further information regarding the public meeting may contact Dr. Angela Nugent, Designated Federal Officer (DFO), U.S. EPA Science Advisory Board by telephone/voice mail at (202) 564-4562 or via e-mail at nugent.angela@epa.gov. Members of the public who wish to obtain the call-in number and access code to participate in any of the teleconference meetings must contact Ms. Sandra Friedman, EPA Science Advisory Board Staff, at telephone/voice mail: (202) 564-2526, via e-mail at: Friedman.Sandra@epa.gov. General information about the SAB can be found in the SAB Web site at <http://www.epa.gov/sab>.

SUPPLEMENTARY INFORMATION:

Summary: Pursuant to the Federal Advisory Committee Act, Pub. L. 92-463, notice is hereby given that the Council will hold a public meeting to provide advice to the EPA on the Agency's plan to develop the third in a series of statutorily mandated comprehensive analyses of the total costs and total benefits of programs implemented pursuant to the Clean Air Act, and that the Council and its two subcommittees will also hold public teleconferences to plan for the public meeting. The dates and times for both the meeting and teleconference are provided above.

Background: Background on the Council, its subcommittees, and on the advisory project that will be the focus of the meeting and teleconferences described in this notice was provided in a Federal Register notice published on February 14, 2003 (68 FR 7531-7534).

In forming the Health and Ecological Effects Subcommittee discussed in that Federal Register notice, the Science Advisory Board Staff Office received nominations for health effects experts. It has therefore decided to rename the Subcommittee as the "Health Effects Subcommittee" of the Council and to work with the Council to form a new subcommittee to focus on ecological effects or to develop another appropriate mechanism to consider and give due attention to ecological effects, including coordination with a new SAB

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Committee on ``Valuing the Protection of Ecological Systems and Services."

Meeting Accommodations: Individuals requiring special accommodation to access the public meetings listed above, should contact the DFO at least five business days prior to the meeting so that appropriate arrangements can be made.

Dated: May 8, 2003.
Robert Flaak,
Acting Deputy Director, EPA Science Advisory Board Staff Office.
[FR Doc. 03-12028 Filed 5-13-03; 8:45 am]
BILLING CODE 6560-50-P

Attachment C - Agenda

**U.S. Environmental Protection Agency
Science Advisory Board
Advisory Council on Clean Air Act Compliance Analysis (Council)
Panel to Review the Revised Draft Analytical Plan for EPA's Second Prospective Analysis
Public Teleconference - May 28, 2003, 12:00-2:00 pm Eastern Time**

Draft Agenda

12:00 -12:15	Opening Remarks, Purpose of Meeting, Chair Dr. Angela Nugent, SAB Members	Dr. Trudy Cameron,
12:15-12:45	Charge for June 11-13 Meeting Clarification Points from the Agency <i>Is it clear and adequate, given the Council's mandate¹: and past history of the Council's review of the 812 Studies?</i>	Mr. Jim DeMocker Panel Members
12:45-1:00	Orientation to Analytical Blueprint	Mr. James DeMocker, EPA
1:00-1:30	Discussion of Analytical Blueprint <i>Is it clear and adequate to address the charge questions? Are supplemental materials needed?</i>	Panel Members
1:30-1:40	Council Schedule/Process for Review/ Report Preparation <i>Is it clear? Do changes need to be made?</i>	Panel Members
1:40-1:55	Draft Agenda for June 11-13, 2003 Meeting <i>Is it clear? Do changes need to be made?</i>	Panel Members
1:55-2:00	Summary of Next Steps	Dr. Trudy Cameron, Chair

¹ Specifically, subsection (g) of the Clean Air Act §312 (as amended by §812 of the amendments) states: “(g) *The Council shall -- (1) review the data to be used for any analysis required under this section and make recommendations to the Administrator on the use of such data, (2) review the methodology used to analyze such data and make recommendations to the Administrator on the use of such methodology; and (3) prior to issuance of a report required under subsection (d) or (e), review the findings of such report, and make recommendations to the Administrator concerning the validity and utility of such findings.*”

Attachment D: Deferred Charge Questions for the SAB Council, as of May 28, 2003

Chapter 6: Human Health Effects Estimation

{DEFER}: 11. Does the Council support the plans described in chapter 6 for estimating, evaluating, and reporting changes in health effect outcomes between scenarios? If there are particular elements of these plans which the Council does not support, are there alternative data or methods the Council recommends?

{DEFER}: 12. EPA seeks advice from the Council regarding the technical and scientific merits of incorporating several new or revised endpoint treatments in the current analysis. These health effect endpoints include: [bullet list omitted]

{DEFER}: 13. EPA seeks advice from the Council regarding the merits of applying updated data for baseline health effect incidences, prevalence rates, and other population characteristics as described in chapter 6. These updated incidence/prevalence data include: [bullet list omitted]

{DEFER}: 14. EPA plans to initiate an expert elicitation process to develop a probability-based method for estimating changes in incidence of PM-related premature mortality. Plans for this expert elicitation are described in chapter 9 of this blueprint, and a separate charge question below requests advice from the Council pertaining to the merits of the design of this expert elicitation. EPA recognizes, however, the possibility that this expert elicitation process may not be fully successful and/or may not be completed in time to support the current 812 analysis. Therefore, in order to facilitate effective planning and execution of the early analytical steps which provide inputs to the concentration-response calculations, EPA seeks advice from the Council regarding the scientific merits of alternative methods for estimating the incidences of PM-related premature mortality, including advice pertaining to the most scientifically defensible choices for the following specific factors: [bullet list omitted]

{DEFER}: 15. In two recent mobile source rulemaking analyses, two recent Title III MACT rulemaking analyses, and the benefits analysis for the Clear Skies Initiative, EPA included an “Alternative Estimate” in addition to a “Base Estimate” of total monetized benefits. The Alternative Estimates included in these five analyses differed in some respects, but in each case they reflected some combination of alternative assumptions regarding key factors in the estimation of PM-related benefits, particularly premature mortality and chronic bronchitis. Because these alternative estimates were motivated in part by the lack of a more fully developed probabilistic methodology able to incorporate the most important analytical uncertainties –and a more extensive probabilistic uncertainty analysis is planned for the current analysis– EPA plans not to incorporate an Alternative Estimate similar to those adopted in the five recent EPA analyses. However, if the probability-based uncertainty analysis is not considered sufficiently extended by other federal agencies, there may be significant pressure on EPA to incorporate an Alternative Estimate similar, or identical, to those incorporated in the recent analyses. EPA seeks advice from the Council pertaining to the merits and utility of adding an Alternative Estimate similar to those incorporated in the five recent EPA analyses, either in addition to or in lieu of a probability-based uncertainty analysis. In addition to providing advice on the overall merit of using an Alternative Estimate approach, EPA seeks advice pertaining to the scientific

and technical merit of three specific adjustments to EPA Primary Estimate methods incorporated in the recent Alternative Estimates, including: [bullet list omitted]

Chapter 8: Economic Valuation

{DEFER}: 19. Does the Council support the plans described in chapter 8 for economic valuation of changes in outcomes between the scenarios? If there are particular elements of these plans which the Council does not support, are there alternative data or methods the Council recommends?

{DEFER}: 20. Pursuant to SAB Council advice from the review of the first draft analytical blueprint, EPA reviewed a number of meta-analyses –either completed or underway– developed to provide estimates for the value of statistical life (VSL) to be applied in the current study. EPA plans to use VSL estimates from the Kochi et al (2002) meta-analysis to generate the primary benefits estimates for this study. In addition, EPA plans to implement two particular adjustments to the core VSL value from Kochi et al (2002): discounting of lagged effects and longitudinal adjustment to reflect changes in aggregate income. Does the Council support these plans, including the specific plans for the adjustments described in chapter 8? If the Council does not support these plans, are there alternative data or methods the Council recommends?

{DEFER}: 21. As described in charge question , EPA has recently incorporated an Alternative Estimate of benefits in several recent Office of Air and Radiation analyses. In addition to the alternative assumptions related to health effects estimation described in charge question , the Alternative Estimates in these analyses applied methods or assumptions for economic valuation which differ significantly from approaches used by EPA to generate base estimates. EPA seeks advice pertaining to the scientific and technical merit of four adjustments to EPA Primary Estimate methods incorporated in the recent Alternative Estimates, including: [bullet list omitted]

{DEFER}: 22. Does the Council support the derivation of VSLY values based on the life expectancy of the general population for application to individual loss of life years in individuals with greatly reduced life expectancy relative to the general population? If the Council does not support this approach, are there any life years-based valuation methods that the Council finds to be consistent with a standard welfare economics-based cost-benefit analysis?

{DEFER}: 23. EPA plans to use updated unit values for a number of morbidity effects, as described in chapter 8. Of particular note, EPA plans to rely on a study by Dickie and Ulery (2002) to provide heretofore unavailable estimates of parental willingness to pay to avoid respiratory symptoms in their children. This study is not yet published; however, EPA expects the study to be published prior to completion of the economic valuation phase of this analysis. Does the Council support the application of unit values from this study, contingent on its acceptance for publication in a peer-reviewed journal? If the Council does not support reliance on this study, are there other data or methods for valuation of respiratory symptoms in children which the Council recommends?

{DEFER}: 24. In the previous prospective 812 study and in the June 2001 draft blueprint for the current study, EPA expressed a preference not to report results in terms of QALY-based cost-effectiveness. This preference was motivated primarily by (1) the lack of generally accepted data and methods applicable to QALY computation in an air pollution context, (2) potential biases in the implicit cost-effectiveness results caused by incomplete netting out of other health and ecological benefits from the numerator, (3)

concerns about the distortionary effect of the simplifying assumptions pertaining to time and quality trade-offs required to estimate QALYs, and (4) the general disconnect between available QALY methodologies and standard economic utility theory. In addition, EPA is seriously concerned about the requirement imposed by the QALY methodology to assign lower values to the lives, and the quality of the lives, of people of advanced age and/or impaired health status. However, the SAB Council in its review of the June 2001 draft blueprint recommended that EPA consider reporting results in terms of implied cost-effectiveness using QALYs or value of statistical life year (VSLY). Does the Council support the specific plans for QALY-based cost-effectiveness described in the current draft blueprint, including the plan to present these results in a less-prominent manner than the benefit-cost-based Primary results (e.g., in a main report sidebar text box or an appendix)? If the Council does not support specific elements of these plans, are the alternative data, methods, or results presentation approaches which the Council recommends?

Chapter 9: Uncertainty Analysis

{DEFER}: 25. Does the Council support the plans described in chapter 9 for estimating and reporting uncertainty associated with the benefit and cost estimates developed for this study? If there are particular elements of these plans which the Council does not support, are there alternative data, models, or methods the Council recommends?

{DEFER}: 28. Does the Council support the plans described in chapter 9 for the expert elicitation pilot project to develop a probability-based PM2.5 C-R function for premature mortality, including in particular the elicitation process design? If the Council does not support the expert elicitation pilot project, or any particular aspect of its design, are there alternative approaches the Council recommends for estimating PM-related mortality benefits for this analysis, including in particular a probabilistic distribution for the C-R function to reflect uncertainty in the overall C-R function and/or its components?

{DEFER}: 29. EPA plans to develop estimates of an independent mortality effect associated with ozone, as described in chapter 9. Does the Council support the use of the most recent literature on the relationship between short-term ozone exposure and daily death rates, specifically that portion of the literature describing models which control for potential confounding by PM2.5? Does the Council agree with the use of that literature as the basis for deriving quantified estimates of an independent mortality impact associated with ozone, especially in scenarios where short-term PM2.5 mortality estimates are used as the basis for quantifying PM mortality related benefits? Does the Council support the plans described in chapter 9 for the pilot project to use this literature to develop estimates of the ozone-related premature mortality C-R function using the three alternative meta-analytic approaches? If the Council does not support this pilot project, or any particular aspect of its design, are there alternative approaches to quantifying ozone-related premature mortality which the Council recommends?

{DEFER}: 30. EPA plans to apply the Kochi et al (2002) meta-analysis to derive an initial value for VSL, as described in Appendix H (a separate charge question pertaining to this element of EPA's VSL plan is presented below). In addition, EPA plans to conduct a follow-on meta-regression analysis of the existing VSL literature to provide insight into the systematic impacts of study design attributes, risk characteristics, and population attributes on the mean and variance of VSL. Does the Council support the plans described in chapter 9 for conducting this meta-regression analysis? If the Council does not support this analysis or any particular aspect of its design, are there alternative approaches which the Council recommends for quantifying the impact of study design attributes, risk characteristics, and

population attributes on the mean and variance of VSL?

{DEFER}: 31. Does the Council support the plans described in chapter 9 for, if necessary upon review and evaluation of the VSL meta-regression, conducting a formal expert elicitation analysis to develop probabilistic representations of the distribution of the value of a statistical life, with the potential for separate distributions developed for individual age groups, and considering potentially influential variables, such as risk characteristics and health status, which may not be completely captured in the meta-regression? If the Council does not support this expert elicitation project, or any particular aspect of its design, are there alternative approaches which the Council recommends for quantifying the influence of population or risk characteristics on the VSL estimates to be used in characterizing uncertainty for this study?

Chapter 11: Results Aggregation and Reporting

{DEFER}: 33. Does the Council support the plans described in Chapter 11 for the aggregation and presentation of analytical results from this study? If the Council does not support these plans, are there alternative approaches, aggregation methods, results presentation techniques, or other tools the Council recommends?

{DEFER}: 36. A cessation lag for benzene-induced leukemia is difficult to estimate and model precisely due to data limitations, and EPA plans to incorporate a five-year cessation lag as an approximation based on available data on the latency period of leukemia and on the exposure lags used in risk models for the Pliofilm cohort (Crump, 1994 and Silver et al., 2002). Does the SAB support adoption of this assumed cessation lag? If the Council does not support the assumed five-year cessation lag, are there alternative lag structures or approaches the Council recommends?

Appendix H: Meta-analysis of VSL

{DEFER}: 37. Does the Council support the plans described in the analytical blueprint to apply the Kochi et al (2002) meta-analysis to derive an estimate for the value of avoided premature mortality attributable to air pollution? If the Council does not support these plans, are there alternative data, models, or methods the Council recommends?